REMARKS/ARGUMENTS

Claims 1 through 21 remain in this application.

Claim Rejections under 35 U.S.C. § 102(e)

The Office Action rejected claims 1 through 21 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2002/0093954 to Weil et al. (the Weil reference). A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. The identical invention must be shown in as complete detail as contained in the claim. See M.P.E.P. 2131. Applicants respectfully traverse this rejection of the claims under 35 U.S.C. 102(e) because the Office Action has failed to prove that the Weil reference discloses each and every element of the claims.

Independent Claim 1 and dependent claims 2 through 8

The Office Action has failed to prove that the Weil reference discloses the elements of claim 1, *inter alia*, of, "subsequent to the switching, identifying all active lightpaths in the network that no longer have an available protection path; and attempting to allocate a protection path to each of the identified active lightpaths." The Weil reference states in paragraph 32 that:

> "In the normal (protected) state 401 of operation of the network of FIG. 1, traffic is flowing on paths that have been established by the routing protocol, or on constraint based routed paths set up by an MPLS signalling protocol. If a failure occurs within the network, the traffic is switched over to pre-established recovery paths thus minimizing disruption of delay-critical traffic. The information on the failure is flooded to all nodes in the network. Receiving this information, the current routing table, including LSPs for traffic engineering (TE) and recovery purposes, is temporarily frozen. The frozen routing table of pre-established recovery paths is used while the network converges in the background defining new LSPs for traffic engineering and recovery purposes. Once the network has converged, i.e. new consistent routing tables of primary paths and recovery paths exist for all nodes, the network then switches over to new routing tables in a

> synchronized fashion. The traffic then flows on the new primary paths, and the new recovery paths are pre-established so as to protect against a further failure."

Furthermore, the Weil reference describes in paragraphs 64 and 65 that:

> "The network now enters its fourth semi stable state 406 during which new primary and reserve paths are calculated (step 505) using a shortest path algorithm. This calculation takes account of the network failure and generates new paths to route traffic around the identified fault.
>
> When a node receives new topology information it updates its LSDB (link state database) and starts the process of recalculating the forwarding table (step 505). To reduce the computational load, a router may choose to postpone recalculation of the forwarding table until it receives a specified number of updates (typically more than one), or if no more updates are received after a specified timeout. After the LSAs (link state advertisements) resulting from a change are fully flooded, the LSDB is the same at every node in the network, but the resulting forwarding table is unique to the node."

In the above description, the Weil reference describes calculating new primary paths and then new reserve paths for the new primary paths. The Weil reference nowhere discloses identifying all active lightpaths in the network that no longer have an available protection path and attempting to allocate a protection path to each of the identified active lightpaths.

In conclusion, the Office Action has failed to show that the Weil reference discloses each and every element of the independent claim 1. Claims 2 through 8 add further patentable matter to Claim 1 and thus are further differentiated and patentable under 35 U.S.C. §102(e) over the Weil reference.

Independent Claim 9 and dependent claims 10 through 14

The Office Action has failed to prove that the Weil reference discloses the elements of claim 9, *inter alia*, of, "subsequent to the switching, classifying as orphans all active lightpaths in the network that no longer have an available protection path as a result of the failure; and attempting to allocate a protection path to each of the orphans each time an active lightpath is released in the network." The Weil reference states in paragraph 32 that:

> "In the normal (protected) state 401 of operation of the network of FIG. 1, traffic is flowing on paths that have been established by the routing protocol, or on constraint based routed paths set up by an MPLS signalling protocol. If a failure occurs within the network, the traffic is switched over to pre-established recovery paths thus minimizing disruption of delay-critical traffic. The information on the failure is flooded to all nodes in the network. Receiving this information, the current routing table, including LSPs for traffic engineering (TE) and recovery purposes, is temporarily frozen. The frozen routing table of pre-established recovery paths is used while the network converges in the background defining new LSPs for traffic engineering and recovery purposes. Once the network has converged, i.e. new consistent routing tables of primary paths and recovery paths exist for all nodes, the network then switches over to new routing tables in a synchronized fashion. The traffic then flows on the new primary paths, and the new recovery paths are pre-established so as to protect against a further failure."

Furthermore, the Weil reference describes in paragraphs 64 and 65 that:

> "The network now enters its fourth semi stable state 406 during which new primary and reserve paths are calculated (step 505) using a shortest path algorithm. This calculation takes account of the network failure and generates new paths to route traffic around the identified fault.
>
> When a node receives new topology information it updates its LSDB (link state database) and starts the process of recalculating the forwarding table (step 505). To reduce the computational load, a router may choose to postpone recalculation of the forwarding table until it receives a specified number of updates (typically more than one), or if no more updates are received after a specified timeout. After the LSAs (link state advertisements) resulting from a change are fully flooded, the LSDB

> is the same at every node in the network, but the resulting forwarding table is unique to the node."

In the above description, the Weil reference describes calculating new primary paths and then new reserve paths for the new primary paths. The Weil reference nowhere discloses classifying as orphans all active lightpaths in the network that no longer have an available protection path as a result of the failure; and attempting to allocate a protection path to each of the orphans each time an active lightpath is released in the network.

In conclusion, the Office Action has failed to show how the Weil reference discloses each and every element of the independent claim 9. Claims 10 through 14 add further patentable matter to Claim 9 and thus are further differentiated and patentable under 35 U.S.C. §102(e) over the Weil reference.

Independent Claim 15 and dependent claims 16 through 21

The Office Action has failed to prove that the Weil reference discloses the elements of claim 15, *inter alia*, of, "means for identifying all active lightpaths in the network that no longer have an available protection path subsequent to the switching; and means for attempting to allocate a protection path to each of the identified active lightpaths each time an active lightpath is released in the network." The Weil reference states in paragraph 32 that:

> "In the normal (protected) state 401 of operation of the network of FIG. 1, traffic is flowing on paths that have been established by the routing protocol, or on constraint based routed paths set up by an MPLS signalling protocol. If a failure occurs within the network, the traffic is switched over to pre-established recovery paths thus minimizing disruption of delay-critical traffic. The information on the failure is flooded to all nodes in the network. Receiving this information, the current routing table, including LSPs for traffic engineering (TE) and recovery purposes, is temporarily frozen. The frozen routing table of pre-established recovery paths is used while the network converges in the background defining new LSPs for traffic engineering and recovery purposes. Once the network has converged, i.e. new consistent routing tables of primary paths and recovery paths

> exist for all nodes, the network then switches over to new routing tables in a synchronized fashion. The traffic then flows on the new primary paths, and the new recovery paths are pre-established so as to protect against a further failure."

Furthermore, the Weil reference describes in paragraphs 64 and 65 that:

> "The network now enters its fourth semi stable state 406 during which new primary and reserve paths are calculated (step 505) using a shortest path algorithm. This calculation takes account of the network failure and generates new paths to route traffic around the identified fault.
>
> When a node receives new topology information it updates its LSDB (link state database) and starts the process of recalculating the forwarding table (step 505). To reduce the computational load, a router may choose to postpone recalculation of the forwarding table until it receives a specified number of updates (typically more than one), or if no more updates are received after a specified timeout. After the LSAs (link state advertisements) resulting from a change are fully flooded, the LSDB is the same at every node in the network, but the resulting forwarding table is unique to the node."

In the above description, the Weil reference describes calculating new primary paths and then new reserve paths for the new primary paths. The Weil reference nowhere discloses means for identifying all active lightpaths in the network that no longer have an available protection path subsequent to the switching; and means for attempting to allocate a protection path to each of the identified active lightpaths each time an active lightpath is released in the network.

In conclusion, the Office Action has failed to show how the Weil reference discloses each and every element of the independent claim 15 and in fact, the Weil reference teaches away from the requirements of claim 15. Claims 16 through 21 add further patentable matter to Claim 15 and thus are further differentiated and patentable under 35 U.S.C. §102(e) over the Weil reference.

CONCLUSION

For the above reasons, the foregoing amendment places the Application in condition for allowance. Therefore, it is respectfully requested that the rejection of the claims be withdrawn and full allowance granted. Should the Examiner have any further comments or suggestions, please contact Jessica Smith at (972) 240-5324.

Respectfully submitted,
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